

*Supplement to "JOURNAL OF THE  
GEOLOGICAL SOCIETY OF AUSTRALIA",  
VOL. 26, Pts 7 & 8*

# **Journal of the Geological Society of Australia**



**Volume 26 1979**

Parts 1 and 2 issued June 1979  
Parts 3 and 4 issued August 1979  
Parts 5 and 6 issued November 1979  
Parts 7 and 8 issued March 1980

---

# Geological Society of Australia Incorporated

---

*President*—J. F. Lovering

*Vice-Presidents*—S. W. Carey, C. D. Branch

*Hon. Secretary*—S. M. Bye

*Hon. Treasurer*—R. M. L. Elliott

*Hon. Administrative Officer*—W. E. Foskett

*Hon. Editor*—J. F. Truswell

---

*Editorial Board*—D. M. Boyd, B. W. Chappell, A. C. Cook, P. J. Cook, D. Denham, P. R. Evans, J. Ferguson, A. D. T. Goode, D. C. Green, D. I. Groves, S. H. Hall, H. J. Harrington, P. A. Jell, M. H. Johnstone, I. McDougall, W. V. Preiss, D. H. Stapledon, R. J. Tingey, R. Underwood, J. J. Veevers, R. H. Vernon, C. J. L. Wilson, G. Williams

---

Address editorial matters to  
the Hon. Editor:  
Dr J. F. Truswell  
Bureau of Mineral Resources  
P.O. Box 378  
Canberra City  
ACT 2601

Address other matters to the  
Business Manager, Miss L. C.  
Tuckwell, at the Society's office:  
Room 1001  
Challis House  
Martin Place  
Sydney 2000

---

ISSN 0016-7614

Price to non-members \$7.50 per issue

---

## CONTENTS

### VOLUME 26

#### PART 1

PETER WELLMAN:

On the Cainozoic uplift of the southeastern Australian highland - - - - - 1

B. L. GULSON & W. GODBEER:

Caesium as a possible discriminant between felsic rocks of different origins  
from eastern Australia - - - - - 11

A. R. ALLEN & L. P. BLACK:

The Harry Creek Deformed Zone, a retrograde schist zone of the Arunta  
Block, central Australia - - - - - 17

P. M. ASHLEY, E. P. AMBLER & R. H. FLOOD:

Two occurrences of ultramafic hornfels in the Biggenden Beds, southeastern  
Queensland - - - - - 29

ALLAN F. WILSON:

Contrast in the isotopic composition of oxygen and carbon between the  
Mud Tank Carbonatite and the marbles in the granulite terrane of the  
Strangways Range, central Australia - - - - - 39

P. M. ASHLEY, P. F. BROWN, B. J. FRANKLIN, A. S. RAY & E. SCHEIBNER:

Field and geochemical characteristics of the Coolac Ophiolite suite and its  
possible origin in a marginal sea - - - - - 45

#### PART 2

E. H. NICKEL, J. A. HALLBERG & R. HALLIGAN:

Unusual nickel mineralisation at Nullagine, Western Australia - - - - - 61

R. A. FACER & P. F. CARR:

K-Ar dating of Permian and Tertiary igneous activity in the southeastern  
Sydney Basin, New South Wales - - - - - 73

R. A. EGGLETON, G. E. HALFORD & S. D. BEAMS:

Hiortdahlite from Jingera, New South Wales - - - - - 81

C. L. FERGUSSON, R. A. F. CAS, W. J. COLLINS, G. Y. CRAIG, K. A. W. CROOK,  
C. MCA. POWELL, P. A. SCOTT & G. C. YOUNG:

The Upper Devonian Boyd Volcanic Complex, Eden, New South Wales - - - - - 87

M. C. BROWN:

Discussion: Fission-track dating of lower Palaeozoic sandstones at Tatong,  
north central Victoria - - - - - 107

### PART 3

EVAN C. LEITCH & IAN McDougall:

The age of orogenesis in the Nambucca Slate Belt: A K-Ar study of low-grade regional metamorphic rocks - - - - -

111

D. BURGER & B. R. SENIOR:

A revision of the sedimentary and palynological history of the northeastern Eromanga Basin, Queensland - - - - -

121

L. B. GILLIGAN, E. ANNE FELTON & F. OLGERS:

The regional setting of the Woodlawn deposit - - - - -

135

E. J. MALONE:

Nature, distribution and relationships of the mineralization at Woodlawn, New South Wales - - - - -

141

D. E. AYRES:

The mineralogy and chemical composition of the Woodlawn massive sulphide orebody - - - - -

155

### PART 4

M. D. PETERSEN & I. B. LAMBERT:

Mineralogical and chemical zonation around the Woodlawn Cu-Pb-Zn ore deposit, southeastern New South Wales - - - - -

169

W. R. RYLL & T. NICHOLAS:

Surface geochemical and biogeochemical expression of base-metal mineralization at Woodlawn, New South Wales, Australia - - - - -

187

D. E. AYRES, M. S. BURNS & J. W. SMITH:

Sulphur-isotope study of the massive sulphide orebody at Woodlawn, New South Wales - - - - -

197

B. L. GULSON:

A lead-isotope study of the Pb-Zn-Cu deposit at Woodlawn, New South Wales - - - - -

203

C. McA. POWELL & C. L. FERGUSSON:

The relationship of structures across the Lambian unconformity near Taralga, New South Wales - - - - -

209

C. D. BRANCH:

Discussion: Implications of a downward-facing fold in the Bathurst Granite contact aureole, Hill End synclinorial zone, New South Wales - - - - -

221

## PART 5

<p>J. B. JAGO: Tasmanian Cambrian biostratigraphy—a preliminary report</p> <p>K. F. McCUE &amp; D. J. SUTTON: South Australian earthquakes during 1976 and 1977</p> <p>B. R. SENIOR &amp; J. A. MABBUTT: A proposed method of defining deeply weathered rock units based on regional geological mapping in southwest Queensland</p> <p>B. G. JONES, R. W. YOUNG &amp; I. G. ELIOT: Stratigraphy and chronology of receding barrier-beach deposits on the northern Illawarra coast of New South Wales</p> <p>R. J. TINGEY: Workshop on Antarctic geology 17-18 May 1979</p>	<p style="margin-right: 20px;">223</p> <p style="margin-right: 20px;">231</p> <p style="margin-right: 20px;">237</p> <p style="margin-right: 20px;">255</p> <p style="margin-right: 20px;">265</p>
--	--

## PART 6

<p>H. H. VEEH, D. SCHWEBEL, W. J. E. VAN DE GRAAFF &amp; P. D. DENMAN: Uranium-series ages of coralline terrace deposits in Western Australia</p> <p>A. W. MANN &amp; R. C. HORWITZ: Groundwater calcrete deposits in Australia: some observations from Western Australia</p> <p>M. R. WALTER, J. H. SHERGOLD, M. D. MUIR &amp; P. D. KRUSE: Early Cambrian and latest Proterozoic stratigraphy, Desert Syncline, southern Georgina Basin</p> <p>S. J. RILEY &amp; T. BRYANT: The relationship between settling velocity and grainsize values</p> <p>STILLWELL AWARD FOR 1978</p> <p>P. W. CROHN: Discussion: On the Cainozoic uplift of the southeastern Australian highland</p> <p>PETER WELLMAN: Reply: On the Cainozoic uplift of the southeastern Australian highland</p> <p>J. W. BROWNLOW: Discussion: The Reids Mistake Formation at Swansea Heads, New South Wales</p> <p>Balance Sheet</p>	<p style="margin-right: 20px;">285</p> <p style="margin-right: 20px;">293</p> <p style="margin-right: 20px;">305</p> <p style="margin-right: 20px;">313</p> <p style="margin-right: 20px;">317</p> <p style="margin-right: 20px;">318</p> <p style="margin-right: 20px;">318</p> <p style="margin-right: 20px;">319</p> <p style="margin-right: 20px;">323</p>
--	--

## PART 7

P. R. EVANS & J. ROBERTS:

Evolution of central eastern Australia during the late Palaeozoic and early Mesozoic - - - - - 325

D. T. CRANE & J. W. HUNT:

The Carboniferous sequence in the Gloucester-Myall Lake area, New South Wales - - - - - 341

KEITH A. W. CROOK:

Tectonic implications of some field relations of the Adelaidean Cooee Dolerite, Tasmania - - - - - 353

MAXWELL R. BANKS & CLIVE F. BURRETT:

A preliminary Ordovician biostratigraphy of Tasmania - - - - - 363

G. E. WILLIAMS:

Sedimentology, stable-isotope geochemistry and palaeoenvironment of dolostones capping late Precambrian glacial sequences in Australia - - - - - 377

## PART 8

E. LOFFLER, D. E. MACKENZIE & A. W. WEBB:

Potassium-argon ages from some of the Papua New Guinea highlands volcanoes, and their relevance to Pleistocene geomorphic history - - - - - 387

E. P. AMBLER, P. M. ASHLEY, R. A. BOTH & T. H. DONNELLY:

Stable isotope and fluid inclusion studies on the Mount Black lead-zinc deposit, southern New South Wales - - - - - 399

P. F. BROWN:

A sheeted dyke complex within the Coolac Ophiolite, southeastern New South Wales - - - - - 411

R. J. HOLCOMBE & S. J. FRASER:

Structural and stratigraphic problems of the Argylla Formation near Mary Kathleen, Queensland - - - - - 419

M. SOLOMON:

Discussion: Delamerian unconformities in Tasmania - - - - - 435

BARRY D. WEBBY:

Reply: Delamerian unconformities in Tasmania - - - - - 436

EMYR WILLIAMS:

Reply: Delamerian unconformities in Tasmania - - - - - 438

Corrigenda - - - - -

439

Information to Authors - - - - -

440